MAR 31 1992

Proposed Issuance of an Explanation of Significant Differences for the Remedial Design and Remedial Action for the Second Operable Unit at the NL Industries, Inc. Superfund Site.

Kathleen C. Callahan, Director
Emergency & Remedial Response Division

Constantine Sidamon-Eristoff
Regional Administrator

Attached for your review and signature, please find two copies of an Explanation of Significant Differences (ESD) to the Record of Decision (ROD) of September 27, 1991 for the Second Operable Unit at the NL Industries, Inc. Superfund Site. This ESD addresses a modification to the selected remedy with respect to the slag and lead oxide materials only.

The ROD included on-site solidification/stabilization and disposal of the slag and lead oxide materials; decontamination of debris and contaminated surfaces and off-site treatment and disposal of contaminants; off-site treatment and disposal of standing water and sediments; appropriate environmental monitoring to ensure the effectiveness of the remedy; and materials recycling, when it could be accomplished in a protective, cost-effective manner.

In January 1992, EPA's Superfund Innovative Technology Evaluation program conducted a treatability study which preliminarily indicates that the lead oxide, along with certain lead bearing debris, could be recycled at an existing off-site secondary lead smelting facility.

In the Focused Feasibility Study performed prior to the ROD, EPA did not consider off-site treatment and off-site disposal of the slag and lead oxide materials to be a feasible remedial alternative based upon the estimated high cost of this alternative and a limited number of facilities identified which were capable of accepting the materials for treatment and disposal. However, EPA has recently identified off-site treatment and off-site disposal facilities, which comply with all federal, state and local requirements, and may accept the slag and lead oxide materials for treatment and/or disposal at a cost that may be competitive with on-site treatment and disposal. In addition, the time to effectuate the off-site disposal remedy is estimated to be between six to twelve months, depending on whether the materials are treated and disposed of off site, or if the materials are treated on site and disposed of off site, respectively. The selected remedy, on-site treatment and disposal, is estimated to take 15 months to complete. Finally, removing the slag and lead oxide from the Site would preclude the need for long term monitoring of the remedy required for the on-site disposal method.

For the above reasons, I recommend that you sign and date the attached ESD. My staff and I are available to discuss this matter further with you at your convenience.

Attachment

SYMBOL --->	SNJS II	SNJS II	NJSB II	ORC-SUP	DD-NJP	DD ERRD	DRA	
SURNAME -->	GILBERT	O'CONNELL	BASSO	STAMATAKY	FRISCO	CALLAHAN	MUSZYNSKI	
DATE ----->	3/27/92	3/30/92	3/30	3/30/92	3/30	3/31	3/31	3/31

REGIONAL ADMINISTRATOR'S APPROVAL OF
CERCLA SECTION 117(c)
EXPLANATION OF SIGNIFICANT DIFFERENCES
REGARDING THE
NL INDUSTRIES, INC. SUPERFUND SITE

Section 117(c) of CERCLA, 42 U.S.C. § 9617(c), requires that EPA publish an Explanation of Significant Difference(s) (ESD) whenever it takes any remedial action under section 106, 42 U.S.C. § 9606, that differs in any significant respect from the final remedial action selected by EPA. The ESD must describe the significant difference(s) between the selected remedial action and the modified remedial action alternative, including an explanation of why such changes were made. Section 117(d) of CERCLA, 42 U.S.C. § 9617(d), requires publication of the ESD in a major local newspaper of general circulation. Such a notice is attached, and said notice is to be published in Today's Sunbeam.

The second operable unit remedy selected for the NL Industries, Inc. Site (Site) in EPA's September 27, 1991 Record of Decision requires that, among other things, the slag and lead oxide materials be treated and disposed of on site.

With the ESD, EPA is announcing that it will allow the option of having slag and lead oxide materials be treated on site and disposed off site, or, treated and disposed off site.

In the Focused Feasibility Study performed prior to the ROD, EPA did not consider off-site treatment and off-site disposal of the slag and lead oxide materials to be a feasible remedial alternative based upon the estimated high cost of this alternative and a limited number of facilities identified which were capable of accepting the materials for treatment and disposal. However, EPA has recently identified off-site treatment and off-site disposal facilities, which comply with all federal, state and local requirements, and may accept the slag and lead oxide materials for treatment and/or disposal at a cost that may be competitive with on-site treatment and disposal. In addition, the time to effectuate the off-site disposal remedy is estimated to be between six to twelve months, depending on whether the materials are treated and disposed of off site, or if the material is treated on site and disposed off site, respectively. The selected remedy, on-site treatment and disposal, is estimated to take 15 months to complete. Finally, removing the slag and lead oxide from the Site would preclude the need for long term monitoring of the remedy required for the on-site disposal method.

In accordance with Section 117(c) of CERCLA, 42 U.S.C. § 9617(c), and the most recent Headquarters guidance, it is not necessary for EPA to solicit public comment on the ESD.

✓ APPROVED

Constantine Sidamon-Eristoff
Regional Administrator

DISAPPROVED

8/31/92
DATE

NL Industries, Inc. Site
Pedricktown, New Jersey

Explanation of Significant Differences

USEPA - Region 2 March 1992

The purpose of this document called an Explanation of Significant Differences (ESD) is to provide the public with an explanation of a change the United States Environmental Protection Agency (EPA) has made to a portion of the remedy contained in the Record of Decision (ROD) of September 27, 1991 for the NL Industries Superfund Site (Site). This ESD is issued pursuant to Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA) 42 U.S.C. §9617(c) and by Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 40 C.F.R. § 300.435(c)(2)(i).

The Site is located at Penns Grove-Pedricktown Road in Pedricktown, Salem County, New Jersey. EPA is the lead agency in the remediation of the Site and the State of New Jersey Department of Environmental Protection and Energy (NJDEPE) is supporting EPA in the remediation.

The ROD, issued by EPA with the concurrence of NJDEPE, addresses the remediation of various media at the Site including: slag and lead oxide piles; debris and contaminated surfaces, and standing water and sediments. This ESD pertains only to that portion of the remedy contained in the ROD that addresses the slag and lead oxide piles. That remedy provides for the on-site solidification/stabilization and on-site disposal of the slag material. However, as a result of newly obtained information, EPA believes that additional alternatives for the slag material, involving off-site components, may be cost-effective and implementable. These additional alternatives are; on-site treatment with off-site disposal; and off-site treatment with off-site disposal. As such, this ESD revises the ROD to allow for these alternatives.

EPA and NJDEPE encourage the public to review this and other documents comprising the Administrative Record in order to obtain a more comprehensive understanding of the Site and the Superfund activities that have been conducted there. The Administrative Record has been prepared under Section 300.825(a)(2) in accordance with the NCP and is available at the following locations:

Penns Grove Public Library
South Broad Street
Penns Grove, New Jersey 08069
(609) 299-255
Hours: M,W: 10:00am-1:00pm, 3:00pm-8:00pm
Th,F: 10:00am-1:00pm, 3:00pm-6:00pm
Sa: 10:00am-1:00pm

Oldmans Municipal Building
Box P-Mill Street
Pedricktown, New Jersey 08067
(609) 299-0780
Call for Hours

U.S. EPA - Region II
26 Federal Plaza
New York, NY 10278
(212) 264-1301
Hours: Mon-Fri: 9:00am-5:00pm

Summary of Site History, Contamination Problems, and Selected Remedy

The NL Industries, Inc. (NL) Site is composed of a 44 acre parcel of real property located in Pedricktown, Salem County, New Jersey. Located at the Site is an abandoned secondary lead smelter and a closed landfill. In the vicinity of the Site are the Delaware River, other abandoned industrial facilities, woodlands and residential areas.

In 1972, NL began the operation of recycling lead from spent automotive batteries at the Site. The batteries were drained of sulfuric acid, crushed and

then processed for lead recovery at the smelting facility.

Between 1973 and 1980, NJDEPE cited NL with 46 violations of State air and water regulations. A 1980 air-monitoring program conducted by NJDEPE detected airborne quantities of lead, cadmium, antimony and ferrous sulfate produced by the smelting process, at levels exceeding the facility's operating permits.

NL ceased smelting operations in May 1982. In October 1982, NL entered into an Administrative Consent Order (ACO) with NJDEPE to conduct a remedial program to address the Site soils, paved areas, surface water runoff, landfill and groundwater. In December 1982, the Site was included on the National Priorities List.

In February 1983, the plant was sold to National Smelting of New Jersey (NSNJ) and smelting operations recommenced. NJDEPE entered into an amended ACO with NSNJ, National Smelting and Refining Company, Inc. (NSR), which was NSNJ's parent company, and NL. The amended ACO clarified the environmental responsibilities of NSNJ and NL. NSNJ ceased operations at the Site in January 1984 and filed for bankruptcy along with NSR in March 1984.

In 1986, NL entered into a consent order with EPA, whereby NL assumed responsibility for conducting a Site-wide Remedial Investigation and Feasibility Study (RI/FS), which EPA has designated as Operable Unit 1, with EPA oversight. Operable Unit 1 addresses the contamination on the Site and areas adjacent to the Site in various environmental media such as air, soils, groundwater, surface water and stream sediments. The RI was approved by EPA in July 1991 and the Draft FS is currently under review. Analyses of these media collected during the RI indicate elevated levels of metals contamination.

In December 1988, EPA initiated a removal action to address hazardous conditions at the Site which presented the most significant risks to human health and the environment. Activities included: the construction of a fence to restrict access to the industrial area; the encapsulation of the slag piles to temporarily provide protection from rain and wind erosion and contaminant migration, and the installation of warning signs around the Site.

A second removal action was initiated by EPA in September 1989, and included sampling and analysis of the slag piles and lead oxide piles, buildings and debris, and standing water and the off-site removal of over 40,000 pounds of hazardous substances. During March 1991, the security fence was repaired and approximately 2,200 empty, rusted and deteriorated steel drums were removed from the Site for recycling. All materials stored in the open and threatening release were placed under the existing covered areas, where they were sampled.

During 1991, EPA performed a Focused Feasibility Study (FFS) and additional sampling at the Site for Operable Unit 2. Operable Unit 2 addresses: the slag piles and lead oxide piles; contaminated buildings, surfaces and assorted debris; and, standing water and sediments. The FFS included a Qualitative Risk Assessment in which the potential risks to human health and the environment for Operable Unit 2 were evaluated. The FFS also included the development and evaluation of remedial alternatives for the Site.

Numerous sources of hazardous wastes were identified at the Site by EPA. High concentrations of lead, cadmium, nickel and other metals were detected in the slag, standing water and dust. The slag piles, totaling approximately 9,800 cubic yards, are stored on Site in unprotected or partially protected deteriorating bins and on paved ground surfaces. Lead concentrations detected in these piles were as high as 252,000 parts per million (ppm). These concentrations exceeded the lead cleanup range of 500 to 1,000 ppm listed in EPA's "Interim Guidance on Establishing Soil Lead Cleanup Levels at Superfund Sites." In addition, results of the Toxicity Characteristic Leachability Procedure test indicate that the majority of piles are classified as hazardous waste based on the leachability of lead and/or cadmium.

Lead, the primary contaminant on the Site, is considered a probable human carcinogen. In addition, exposure to lead causes noncarcinogenic effects on the central nervous system. The Qualitative Risk Assessment performed for Operable Unit 2 indicates that the potential for inhalation of contaminated dust is considered significant for on-site workers and nearby receptors. Runoff via erosion from precipitation is a mechanism for potential release of contaminants into the environment. In addition, exposure via accidental ingestion, inhalation or through dermal

contact is of potential concern for workers and trespassers on the Site.

On September 27, 1991, EPA issued a ROD, which embodies EPA's selection of a remedy for Operable Unit 2. The ROD called for: on-site solidification/stabilization of the slag and lead oxide materials with on-site placement of these materials; the recycling of appropriate materials; decontamination of debris and contaminated surfaces, with off-site treatment and disposal of contaminated material; and off-site treatment and disposal of contaminated standing water and sediments.

In January 1992, EPA's Superfund Innovative Technology Evaluation program conducted a treatability study to determine if the slag, lead oxide, or other lead bearing debris could be recycled. Results indicate that the lead oxide, along with certain lead bearing debris on the Site, could be recycled at an existing off-site secondary lead smelting facility. The study also indicated that it was not feasible to recycle the slag material by this process.

Description of the Significant Difference Between the September 1991 ROD and the Modified Remedy

As stated earlier, the selected remedy addresses a number of sources of contamination present at the NL Site: contaminated buildings and surfaces, debris, standing water, sediment, and the slag and lead oxide piles. This ESD explains a change in the remedial approach to only the following components; the slag and lead oxide piles. All other contaminated media will be addressed as described in the September 1991 ROD.

In the FFS performed prior to the ROD, EPA did not consider off-site treatment and off-site disposal of slag material to be a feasible remedial alternative. At that time, EPA determined that disposing of the slag off-site would not be cost-effective, and that appropriate off-site disposal facilities may not be available to accept the slag. However, EPA has recently identified off-site treatment and off-site disposal facilities which comply with all federal, state and local requirements, and could accept the waste material for treatment and/or disposal at a cost that may be competitive with on-site treatment and disposal. In addition, the time to effectuate the off-site disposal remedy is estimated to be between six to twelve months, depending on whether the slag is treated and disposed of off site, or if it is treated on site and disposed of off site. It should be noted that regardless of whether disposal occurs on-site or off-site, the treatment of the slag material would remain the same. The selected remedy, on-site treatment and disposal, is estimated to take 15 months to complete. Finally, removing the slag from the Site precludes the need for long term monitoring of the remedy required for the on-site disposal method.

Although solidification/stabilization and on-site disposal of the slag continues to be a protective, cost effective and implementable method of addressing the slag, EPA is issuing this ESD to notify the public that based on information recently obtained by EPA, solidification/stabilization and off-site disposal may be deemed more appropriate based on comparable protectiveness, cost, and implementation time. EPA will determine whether on-site or off-site disposal of the treated slag is more appropriate based on further evaluation of these two options during the remedial design phase of this project.

Considering the change that has been made to the selected remedy, EPA believes that the remedy remains protective of human health and the environment, complies with federal and state requirements that were identified in the ROD as applicable or relevant and appropriate to this remedial action at the time the original ROD was signed, and is cost effective.

In accordance with the requirements of CERCLA, EPA published a notice of this ESD in Today's Sunbeam, a local newspaper. In addition, this ESD has been included in the Administrative Record, which is available at the repositories for public review.